

## Delaware Gas Efficiency

Challenges and Opportunities for Delaware

# Delaware Gas Market Overview

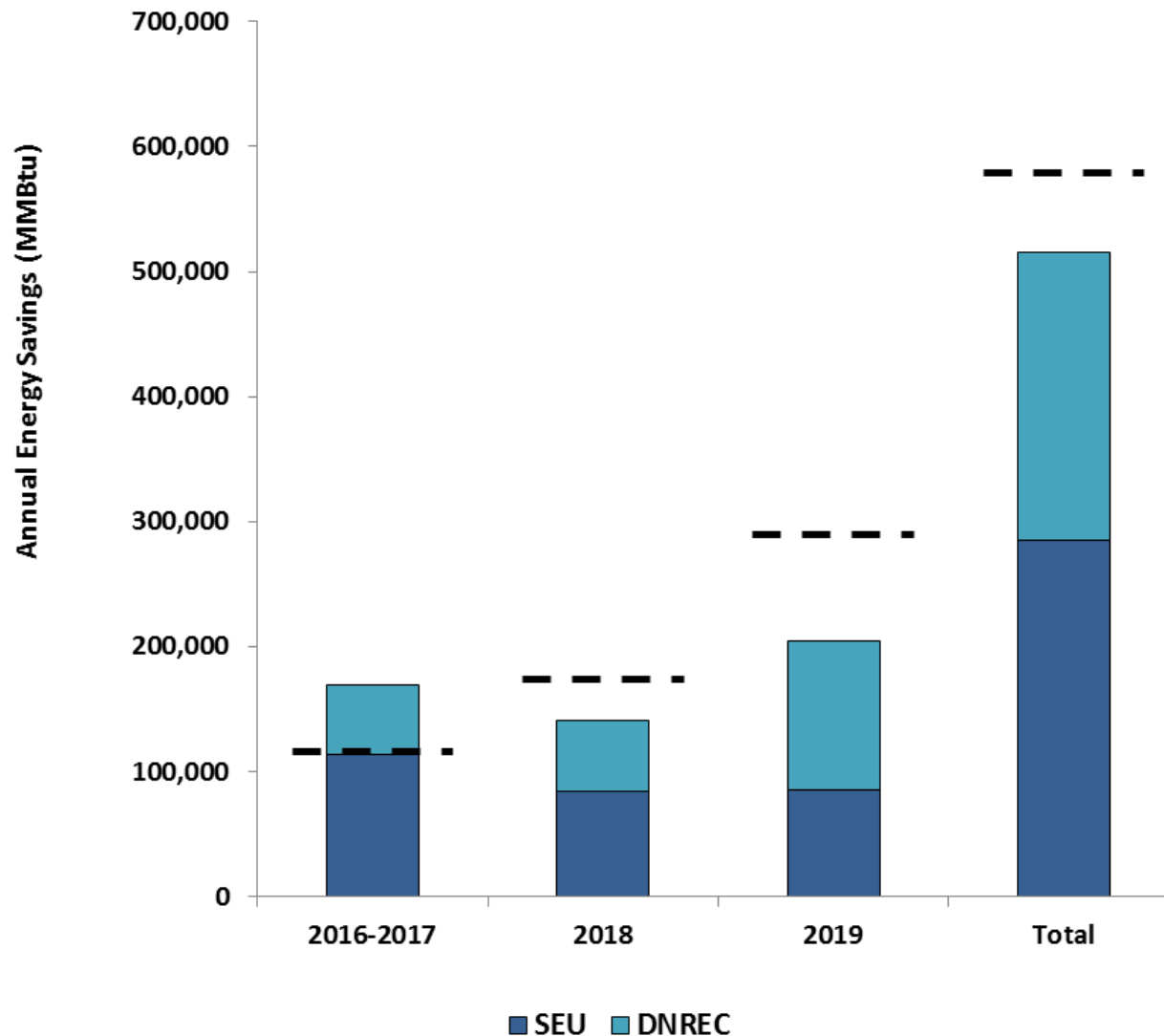
## Chesapeake Gas



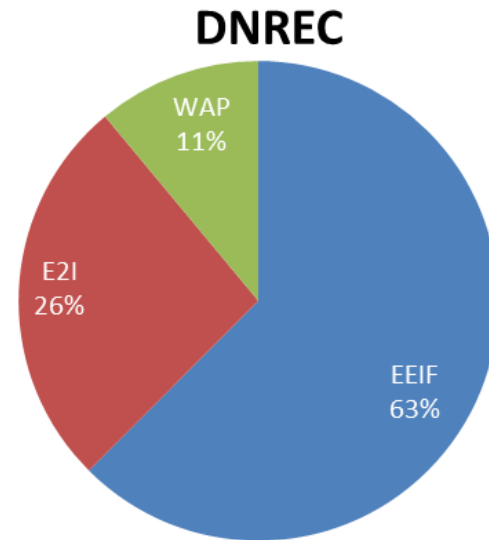
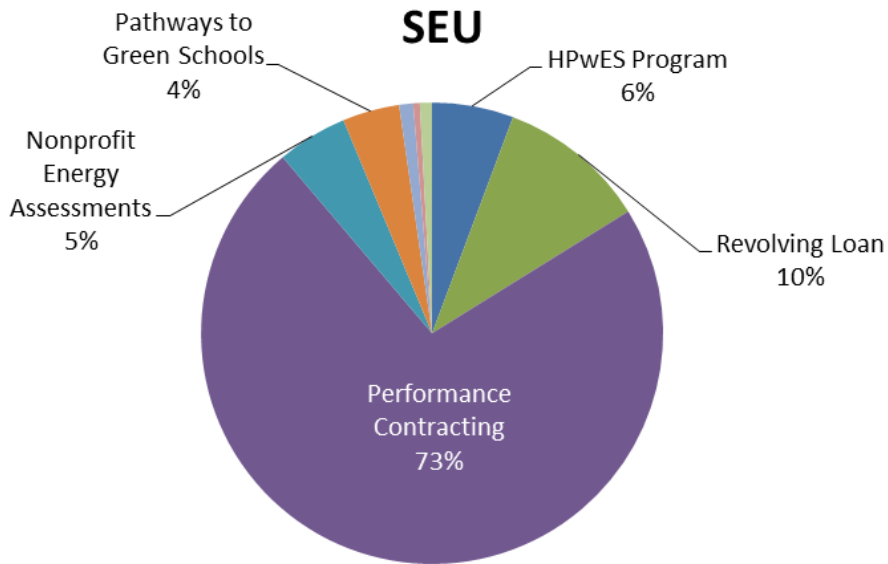
## DPL Electric



# Current Gas Proposed Savings and Goals



# Current Gas Programs



- ▶ Statewide goal of 579 BBtu
- ▶ SEU planned savings of 285 BBtu (49% of statewide goal)
- ▶ DNREC planned savings of 231 BBtu (40% of statewide goal)

# Gas Program Challenges

- ▶ Low avoided costs (especially for DPL)
- ▶ Fewer end uses (mainly space and water heating)
- ▶ Big impact measures (especially envelope) are often expensive, complicated, and hard to measure
- ▶ Hard to coordinate with electric programs
  - May be different utilities serving the same customer
  - A utility's electric and gas service areas may not coincide, even if the utility serves both fuels
  - Engineers, program contractors may not have expertise in both electric and gas
- ▶ Can be difficult to scale

# Typical Gas Programs

## ► Residential

- Prescriptive rebates for market driven space and water heating equipment
- Home Performance with EnergyStar – free audits with DI for showerheads and faucet aerators
- Low-income/multi-family – similar to HPwES
- EnergyStar New Homes

## ► Commercial/Industrial – include gas savings projects in standard C&I offerings

- Prescriptive
- Custom
- Building tune-ups, building controls, RCx, continuous commissioning, etc.

# Sample Measure Costs (SEU HPwES)

| Measure                                       | Incremental Cost (\$/therm) | Incentive (\$/therm) |
|---|-----------------------------|----------------------|
| Air Sealing 20% Improvement                   | 50.82                       | 38.11                |
| Air Sealing 30% Improvement                   | 21.66                       | 16.25                |
| Boiler  | 6.02                        | 8.30                 |
| Faucet aerators - Gas WH - Bathroom (1.0 gpm) | 2.18                        | 2.18                 |
| Faucet aerators - Gas WH - Kitchen (1.5 gpm)  | 3.06                        | 3.06                 |
| Furnace Tier 2                                | 12.27                       | 6.74                 |
| Hot Water Pipe Insulation - Gas WH            | 2.38                        | 2.38                 |
| Insulation - Attic R-20                       | 55.84                       | 41.88                |
| Insulation - Attic R-30                       | 23.26                       | 17.45                |
| Insulation - Basement/Enclosed Crawlspace     | 283.17                      | 212.38               |
| Insulation - Exterior Wall                    | 24.59                       | 18.45                |
| Insulation - Rim Joist                        | 37.98                       | 28.49                |
| Low Flow Shower Heads 2.0 - Gas WH            | 2.09                        | 2.09                 |
| Tankless Water Heater                         | 22.91                       | 24.43                |

# Sample Measure Costs (DNREC EEIF Prescriptive)

| Measure                              | Incremental Cost (\$/therm) | Incentive (\$/therm) |
|--------------------------------------|-----------------------------|----------------------|
| Furnace, 125 MBH, 95 AFUE with ECM   | 6.35                        | 2.49                 |
| Furnace, 125 MBH, 97 AFUE with ECM   | 7.84                        | 3.59                 |
| Boiler, 150 MBH, 90 AFUE             | 9.12                        | 7.55                 |
| Boiler, 150 MBH, 95 AFUE             | 8.34                        | 7.36                 |
| Boiler, 280 MBH, 90 AFUE             | 4.89                        | 4.05                 |
| Boiler, 280 MBH, 95 AFUE             | 4.47                        | 3.94                 |
| Condensing Unit Heater               | 7.82                        | 2.16                 |
| Infrared Unit Heater                 | 7.28                        | 1.83                 |
| Tankless Gas Water Heater            | 23.06                       | 8.89                 |
| High Efficiency Indirect             | 8.45                        | 1.93                 |
| Condensing Stand Alone Water Heater  | 9.96                        | 2.13                 |
| Pre-rinse spray valve                | 0.41                        | 0.07                 |
| Boiler Reset Controls                | 3.30                        | 0.75                 |
| Steam Traps                          | 0.97                        | 0.19                 |
| ENERGY STAR Programmable thermostats | 1.41                        | 0.38                 |

- Also opportunities for significant low-cost savings as custom projects in large C&I facilities



Thank You

Eric Belliveau

Optimal Energy, Inc.  
10600 Route 116, Suite 3  
Hinesburg, VT 05461

802-482-5600